

【Sequence listing】

<110> Scigen Harvest Co., Ltd.

<120> Genes for S-adenosyl L-methionine:jasmonic acid carboxyl methyl transferase and a method for the development of pathogen- and stress-resistant plants using the genes

<130> OPF0154

<150> KR

<151> 2000-06-13

<160> 5

<170> KopatentIn 1.71

<210> 1

<211> 1170

<212> DNA

<213> Arabidopsis thaliana

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 aagaagttaa tgatgagcaa ttcagagatt tcgagcattg gaatcgccga ctaggctgc 180  
 tcttcggtc cgaacagtct cttgtccatc tccaacatag ttgacacgat ccacaacttg 240  
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 aatgacttca actacatatg tgcttctttg ccagagtttt acgaccgggt taataataac 360  
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gccaaagagg gtatcatcga ggaagagaag atcgatgctt tcaacgctcc ttactatgct 840  
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 gcaataaggt ccaaaccga agccctagct agtggccgaa gagtgtctaa taccataaga 1020  
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 <223> open reading frame for JMT

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 gga aac ggg gaa aca agt tat gcc aag aac tcc acc gct cag agc aac 95  
 Gly Asn Gly Glu Thr Ser Tyr Ala Lys Asn Ser Thr Ala Gln Ser Asn  
 15 20 25  
 ata ata tct cta ggc aga aga gta atg gac gag gcc ttg aag aag tta 143  
 Ile Ile Ser Leu Gly Arg Arg Val Met Asp Glu Ala Leu Lys Lys Leu  
 30 35 40  
 atg atg agc aat tca gag att tcg agc att gga atc gcc gac tta ggc 191  
 Met Met Ser Asn Ser Glu Ile Ser Ser Ile Gly Ile Ala Asp Leu Gly  
 45 50 55  
 tgc tcc tcc ggt ccg aac agt ctc ttg tcc atc tcc aac ata gtt gac 239  
 Cys Ser Ser Gly Pro Asn Ser Leu Leu Ser Ile Ser Asn Ile Val Asp  
 60 65 70 75  
 acg atc cac aac ttg tgt cct gac ctc gac cgt cca gtc cct gag ctc 287  
 Thr Ile His Asn Leu Cys Pro Asp Leu Asp Arg Pro Val Pro Glu Leu  
 80 85 90

aga gtc tct ctc aac gac ctc cct agc aat gac ttc aac tac ata tgt 335  
Arg Val Ser Leu Asn Asp Leu Pro Ser Asn Asp Phe Asn Tyr Ile Cys  
95 100 105

gct tct ttg cca gag ttt tac gac cgg gtt aat aat aac aag gag ggt 383  
Ala Ser Leu Pro Glu Phe Tyr Asp Arg Val Asn Asn Asn Lys Glu Gly  
110 115 120

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Leu Gly Phe Gly Arg Gly Gly Gly Glu Ser Cys Phe Val Ser Ala Val  
125 130 135

cca ggt tcg ttc tac gga cgt ttg ttt cct cgc cgg agc ctt cac ttt 479  
Pro Gly Ser Phe Tyr Gly Arg Leu Phe Pro Arg Arg Ser Leu His Phe  
140 145 150 155

gtg cat tct tct tct agt tta cat tgg ttg tct cag gtt cca tgt cgt 527  
Val His Ser Ser Ser Ser Leu His Trp Leu Ser Gln Val Pro Cys Arg  
160 165 170

gag gcg gag aag gaa gac agg aca ata aca gct gat tta gaa aac atg 575  
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175 180 185

ggg aaa ata tac ata tca aag aca agt cct aag agt gca cat aaa gct 623  
Gly Lys Ile Tyr Ile Ser Lys Thr Ser Pro Lys Ser Ala His Lys Ala  
190 195 200

tat gct ctt caa ttc caa act gat ttc ttg gtt ttt ttg agg tca cga 671  
Tyr Ala Leu Gln Phe Gln Thr Asp Phe Leu Val Phe Leu Arg Ser Arg  
205 210 215

tct gag gag ttg gtc ccg gga ggc cga atg gtt tta tcg ttc ctt ggt 719  
Ser Glu Glu Leu Val Pro Gly Gly Arg Met Val Leu Ser Phe Leu Gly  
220 225 230 235

aga aga tca ctg gat ccc aca acc gaa gag agt tgc tat caa tgg gaa 767  
Arg Arg Ser Leu Asp Pro Thr Thr Glu Glu Ser Cys Tyr Gln Trp Glu  
240 245 250

ctc cta gct caa gct ctt atg tcc atg gcc aaa gag ggt atc atc gag 815  
Leu Leu Ala Gln Ala Leu Met Ser Met Ala Lys Glu Gly Ile Ile Glu  
255 260 265

gaa gag aag atc gat gct ttc aac gct cct tac tat gct gcg agc tcc 863  
Glu Glu Lys Ile Asp Ala Phe Asn Ala Pro Tyr Tyr Ala Ala Ser Ser  
270 275 280

gaa gag ttg aaa atg gtg ata gag aaa gaa ggg tca ttt tcg atc gat 911

Glu Glu Leu Lys Met Val Ile Glu Lys Glu Gly Ser Phe Ser Ile Asp  
 285 290 295

agg ctt gag ata agt ccg att gat tgg gaa ggt ggg agt atc agt gag 959  
 Arg Leu Glu Ile Ser Pro Ile Asp Trp Glu Gly Gly Ser Ile Ser Glu  
 300 305 310 315

gag agt tat gac ctt gca ata agg tcc aaa ccc gaa gcc cta gct agt 1007  
 Glu Ser Tyr Asp Leu Ala Ile Arg Ser Lys Pro Glu Ala Leu Ala Ser  
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ggc cga aga gtg tct aat acc ata aga gct gtg gtc gag ccg atg cta 1055  
 Gly Arg Arg Val Ser Asn Thr Ile Arg Ala Val Val Glu Pro Met Leu  
 335 340 345

gaa cct act ttc ggt gaa aat gtg atg gac gag ctt ttt gaa agg tat 1103  
 Glu Pro Thr Phe Gly Glu Asn Val Met Asp Glu Leu Phe Glu Arg Tyr  
 350 355 360

gca aag atc gtg gga gag tac ttc tat gta agc tcg cca cga tac gct 1151  
 Ala Lys Ile Val Gly Glu Tyr Phe Tyr Val Ser Ser Pro Arg Tyr Ala  
 365 370 375

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 Ile Val Ile Leu Ser Leu Val Arg Thr Gly  
 380 385

gccaatatac atgtctttgg gcctacaatg acatgatttg gtagttttct aatcaagcat 1260

atgtaatata atttgcttcg agaataaaat aataaaataa agtgtgatgt tacggtagac 1320

ctttttttt ttttctcat ttacggtaga cctatagtat taaaacaaat agaatcagct 1380

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caaatagaac taccttttgg gccaaaaaaa aaaaaa 1476

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<212> PRT

<213> Arabidopsis thaliana

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Arg Arg Val Met Asp Glu Ala Leu Lys Lys Leu Met Met Ser Asn Ser  
 35 40 45  
 Glu Ile Ser Ser Ile Gly Ile Ala Asp Leu Gly Cys Ser Ser Gly Pro  
 50 55 60  
 Asn Ser Leu Leu Ser Ile Ser Asn Ile Val Asp Thr Ile His Asn Leu  
 65 70 75 80  
 Cys Pro Asp Leu Asp Arg Pro Val Pro Glu Leu Arg Val Ser Leu Asn  
 85 90 95  
 Asp Leu Pro Ser Asn Asp Phe Asn Tyr Ile Cys Ala Ser Leu Pro Glu  
 100 105 110  
 Phe Tyr Asp Arg Val Asn Asn Asn Lys Glu Gly Leu Gly Phe Gly Arg  
 115 120 125  
 Gly Gly Gly Glu Ser Cys Phe Val Ser Ala Val Pro Gly Ser Phe Tyr  
 130 135 140  
 Gly Arg Leu Phe Pro Arg Arg Ser Leu His Phe Val His Ser Ser Ser  
 145 150 155 160  
 Ser Leu His Trp Leu Ser Gln Val Pro Cys Arg Glu Ala Glu Lys Glu  
 165 170 175  
 Asp Arg Thr Ile Thr Ala Asp Leu Glu Asn Met Gly Lys Ile Tyr Ile  
 180 185 190  
 Ser Lys Thr Ser Pro Lys Ser Ala His Lys Ala Tyr Ala Leu Gln Phe  
 195 200 205  
 Gln Thr Asp Phe Leu Val Phe Leu Arg Ser Arg Ser Glu Glu Leu Val  
 210 215 220  
 Pro Gly Gly Arg Met Val Leu Ser Phe Leu Gly Arg Arg Ser Leu Asp  
 225 230 235 240  
 Pro Thr Thr Glu Glu Ser Cys Tyr Gln Trp Glu Leu Leu Ala Gln Ala  
 245 250 255  
 Leu Met Ser Met Ala Lys Glu Gly Ile Ile Glu Glu Glu Lys Ile Asp  
 260 265 270  
 Ala Phe Asn Ala Pro Tyr Tyr Ala Ala Ser Ser Glu Glu Leu Lys Met  
 275 280 285  
 Val Ile Glu Lys Glu Gly Ser Phe Ser Ile Asp Arg Leu Glu Ile Ser  
 290 295 300

Pro Ile Asp Trp Glu Gly Gly Ser Ile Ser Glu Glu Ser Tyr Asp Leu  
 305 310 315 320

Ala Ile Arg Ser Lys Pro Glu Ala Leu Ala Ser Gly Arg Arg Val Ser  
 325 330 335

Asn Thr Ile Arg Ala Val Val Glu Pro Met Leu Glu Pro Thr Phe Gly  
 340 345 350

Glu Asn Val Met Asp Glu Leu Phe Glu Arg Tyr Ala Lys Ile Val Gly  
 355 360 365

Glu Tyr Phe Tyr Val Ser Ser Pro Arg Tyr Ala Ile Val Ile Leu Ser  
 370 375 380

Leu Val Arg Thr Gly  
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<220>  
 <223> 5' primer for PCR of JMT gene

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